

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application.

**Listing of Claims:**

1 – 48. (Canceled)

49. (New) A computer-implemented method, comprising:  
determining a weight for each tuple in a database based on a number of times the tuple was accessed during one or more past queries executed against the database;  
selecting sample tuples from the database based on weights of the tuples;  
approximating an answer to a given query using the sample tuples and weights of the sample tuples.

50. (New) The method of claim 49, wherein approximating the answer to the given query comprises:  
executing the given query against the sample tuples to identify answer tuples; and  
approximating the answer to the given query using information from the answer tuples and the weights of the answer tuples.

51. (New) The method of claim 49, wherein approximating an answer to the given query comprises:  
for each sample tuple, determining a probability with which the sample tuple was selected;  
executing the given query against the sample tuples to identify answer tuples; and  
approximating the answer to the given query using information from the answer tuples and the probabilities of the answer tuples.

52. (New) The method of claim 49, wherein approximating an answer to the given query comprises:

for each sample tuple, determining a probability with which the sample tuple was selected;

executing the given query against the sample tuples to identify answer tuples; and

approximating the answer to the given query using information from the answer tuples and inverses of the probabilities of the answer tuples.

53. (New) One or more computer-readable media storing computer-executable instructions, which, when executed by a computing device, implement a method comprising:

collecting information related to past queries against the database;

examining the collected information to determine an access frequency for each tuple accessed during the past queries;

determining a sample weight for each tuple based on the access frequency of the tuple;

selecting a sample of tuples from the database based on weights of the tuples;

executing a query against the sample to determine an approximate answer to the query made against the database.

54. (New) The one or more computer-readable media of claim 53, wherein executing the query against the sample to determine the approximate answer to the query made against the database comprises:

for each tuple in the sample, determining a probability with which the tuple was selected;

executing the query against the sample of tuples to identify answer tuples; and

determining the approximate answer using information from the answer tuples in the sample and inverses of the probabilities of the answer tuples.